Announcement Effect of MBO in China

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Abstract of thesis entitled: Announcement Effect of MBO in China

This paper investigates the announcement effect of management buyouts (MBO) in China and analyzes whether such effect is related with announcement year, underlying assets, ESOP participation, competitive purchaser, and the results of success or not. Explanation for the announcement effect is illustrated with regard to earning capacity and pricing. Our sample includes 114 MBO announcements of 85 companies from 1997 to 2007, covering all the MBO of China listing companies with public announcement concerning the transaction. We present four major findings. First, the announcement effect is negative towards apparent MBOs, except when the purchaser is founder of the company. The negative effect reflects investors' pessimistic attitude towards MBO. Second, some factors may lead to more negative announcement effect: announcement year after 2003, acquisition of parent company, no ESOP participation, etc. Third, the profitability of companies does deteriorate after completion of MBO, which verifies investors' misgivings about worsen earning capacities after MBO. Fourth, the net asset value, a key measure of share pricing in MBO, is manipulated down before MBO. The low transfer price may be another reason for the negative announcement effect.

Key Words: Management buyout (MBO); Announcement effect; Profitability; DuPont analysis; Net asset value (NAV)

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論文摘要

本文考察了管理層收購在中國股票市場的公告效應，分析這種反應是否與公告年份，標的資產，職工持股計劃，競購，及最終成功與否有關，並且從盈利能力及股權定價的角度來解釋公告效應。研究樣本包括 1997 年至 2007 年 85 間公司的 114 個公告，覆蓋了中國上市公司與管理層收購相關的所有公告。我們有以下四個主要結論：

第一：顯性管理層收購具有負面的公告效應，除非收購者是公司創始人。負面的公告效應反映了投資者對管理層收購的悲觀態度。

第二：在管理層收購中，03 年以後實施，母公司作爲標的資產，不包含職工持股計劃等因素可能導致更加負面的公告效應。

第三：實證表明公司盈利能力在管理層收購完成之後發生顯著惡化，印證了投資者對於管理層收購之後公司盈利的擔憂。

第四：作爲管理層收購的重要定價標準，淨資產價值在管理層收購之前被操縱壓低，導致股份轉讓價格偏低，可能也是負面公告效應的重要原因。

關鍵字：管理層收購；公告效應；盈利能力；杜邦分析；淨資產價值

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1. Introduction

The management buyout (MBO) is a type of tender offer that the managers and/or executives of a company purchase controlling interest in a company from existing shareholders. The purpose of such a buyout from the managers' point of view may be to save their jobs, either if the business has been scheduled for closure or if they would be substituted by another management team; they may also want to maximize the financial benefits from the success they bring to the company; in addition, it is a strategy to ward off aggressive buyers.

There was a boom of MBO in the US in the 1980s during which over a hundred of MBO offers were reported. The management purchases the shares in the secondary market and acquires the controlling right of company. The MBO proposals in the US could generate positive abnormal stock returns and bring wealth gains to the shareholders (DeAnglo, DeAnglo and Rice (1984)). After MBO the operating performance of those companies has remarkable improvement (Kaplan (1989)), in comparison with no improvement of unsuccessful MBOs (Eli Ofek (1994)).

MBO in China started since late 1990s. The first public announced MBO case of Chinese listed firms was Shanghai Dazhong Public Utilities (600635.SH) in 1997 which reported legal shares transfer to a company controlled by the employees'

shareholding society. Since then many companies in China started proceedings of MBO.

Due to the difference of share structure and regulation system, the MBO in China is quite different from those in the US:

- Acquired shares: non-tradable shares v.s. transferable shares.

In the US, all the shares of a company are transferable in secondary market. For MBO the management acquires the shares in the secondary market as an open action. But in China, shares were split into tradable shares and non-tradable shares (NTS) before the NTS reform. The non-tradable shares, including state shares and legal shares, could not be traded in secondary market. Most MBO of listed state owned enterprises (SOE) are realized through the transfer of non-tradable shares without public transaction in secondary market.

- Share pricing: net asset value v.s. stock price in secondary market

As the MBO in the US is publicly operated in secondary market, the acquisition price should be comparable to the stock price and usually with a premium. But in China there are no specific rules for non-tradable shares pricing. In Mar 1997 China government prescribed that the transfer price of state shares must not be lower than net asset value. Thereafter a majority of such transaction pricings refer to the net asset value which is much lower than the secondary market price.

- Financing of MBO: self-owned money v.s. bond, loan and private equity

In the US market, the MBO is a kind of leverage buyout (LBO). The management team can get money from bond issuance, cooperation with private equities as well as loans from financial institutions like investment banks. But in China there is neither mature bond market nor active equity investment institutions. Moreover, China government strictly forbids management teams using state assets as collateral to secure bank loans. Therefore there is not efficient source for MBO financing in China and the management could only use self-owned money. As a matter of fact most MBO announcements in China do not reveal any source of the money for the acquisitions.

- Competition: Little v.s. Much

Like other types of mergers and acquisitions, the management in the US publicly proposed MBO with share acquisition in the secondary market. In many cases the management faces competition of offer bids from other individuals. But in China the MBO is usually conducted through negotiation between the management and representatives of the government or other institutions. The lack of competition may result in unfair deals, especially in pricing.

The huge differences as stated above motivate us to investigate MBO in China. This paper studies the initial announcement effect and explains the underlying reasons with regard to profitability and price manipulation.

First we collect the information of MBO announcements of China listing companies. Currently there is no consensus on the MBO sample in China. We make a screening

of China listing companies that were reported to conduct MBO and check the announcements to identify every detail of the MBO cases. At last we construct a database including 114 MBO announcements of 85 China listing companies.

Then we study the announcement effect of MBO. The method used to estimate the effect of MBO announcement is the conventional event-time methodology which is also used in DeAnglo, DeAnglo and Rice (1984) and Hite and Vetsuypens (1989). To exclude the noise effect of other events and intensify the real effect of MBO, we divide the initial announcements of 85 companies into 6 groups according to the disclosure transparency, timing, and special characters. Both student t test and Wilcoxon test are conducted on the cumulated abnormal return (CAR) in each group to examine whether there is any significant announcement effect.

Next we examine whether the announcement effect of MBO has any relevance with some variables, including year, underlying asset, ESOP participation, competitive purchaser and the results. Since the variables are all dummy variables, the statistic tests not only examine the significance of CAR in each state of variables but also the difference of CAR when the variable changes. Correlation between every two variables is calculated to demonstrate the independence.

Finally we try to explain the announcement effect with regard to profitability and pricing. We investigate profitability change around MBO event year with DuPont analysis to disclose the change of earning capacity and leverage ratio. Dividend policy and shareholder's return are examined to illustrate the operating retention and equity

holder's benefits in post-MBO period. We also test whether the transfer share price (measured by NAV) is manipulated down before MBO.

The main contribution of our research lies in that:

- Construction of database including all the MBO announcements of China listing companies until 2007. To our knowledge this is the most complete collection of MBO announcement information in China up to now.
- Group division of announcement events according to the disclosure transparency, timing, and special characters. This step is unnecessary for the research of MBO in the US since all the proposals are disclosed timely and transparently. But in China, many announcements of MBO are obscure and mixed with other events. The group division minimizes the noise effect of other events and intensifies the real announcement effect of MBO. This is the key reason that I get the significant results for China MBO effect but others do not (Yi (2003), Feng and Dai (2005)).
- We propose explanation of announcement effect with regard to profitability and pricing. In the US the wealth effect is usually regarded as gain-sharing between the management and the stockholders (DeAnglo, DeAnglo and Rice (1984)). But the MBO in China do not involve secondary market transaction and the report effect mainly reflects investors' subjective attitude. If overall investors perceive right, the announcement effect should be in line with potential profitability change and abnormal transaction price.
- We employ the industry adjusted financial measures to review a firm's performance ranking in the industry and the annual difference of industry

adjusted measures to inspect the individual change. The model is applied to most financial measures examined in our paper, including ROE, net margin, asset turnover, equity multiplier, dividend payout ratio, dividend yield, stockholding returns, etc.

The article is organized as follows. In section 2, we will review the wealth effect, operation improvement and disputes about MBO in the US as well as the relevant research and regulations in China. In section 3, data selection and sources will be introduced. In section 4, we will test the announcement effect in MBO groups divided by announcement transparency, timing and special characters. Furthermore we will examine whether the announcement effect has any relevance with certain variables. In section 5 we will explain the announcement effect with regard to the profitability and pricing justness. And in section 6, we will make conclusion.

2. Review of literatures and regulations

2.1. MBO in the US

Management buyout is the purchase of a publicly traded corporation by a group of investors including the firm's management. In the US it is a tender offer in the secondary market similar as other acquisitions.

Many researchers studied whether the public stockholders could benefit from MBO and found remarkable increase in the shareholders' wealth on the announcement of the MBO proposals. For example, DeAnglo, DeAnglo and Rice (1984) studied 72 MBO proposals during the period of 1973−1980 and reported an average of 22.27%

abnormal stock return in a 2-day window around announcement date in their sample. They also reported an average premium of 56% offered by the management in cash, which was on average higher than the premium reported for the inter-firm cash tender offer of 49–56% by Bradley (1980) and Jarrell and Bradley (1980). Torabzadeh and Bertin (1987) and Travlos and Cornett (1993) also provided evidence for the wealth effect on MBO. These results strongly supported the gain-sharing hypothesis between the management and shareholders.

Since the completion of MBO could lead to improved incentives and mitigative principle-agent problems, researchers are interested in the change of operating performance after MBO. Kaplan (1989), by examining the post-buyout operating changes in 48 large deals of successful MBO between 1980 and 1986, reported remarkable improvement in operating income, cash flow and market return after MBO. In comparison, Eli Ofek (1994) used a sample of 120 unsuccessful MBOs and found no evidence of performance improvement of these firms. Smith (1990) also found no improvement in operating performance in a sample of 24 unsuccessful MBOs in the year following the buyout attempts.

Although MBO could bring wealth gains to shareholders and potential improvement in operating performance, it is questioned for the validity since management as purchaser of the shares has incentive to minimize compensation paid. The impending possibility of an MBO may lead to principal-agent problems, moral hazard, asymmetric information and even the downward manipulation of the stock price via adverse information disclosure. Longstreth (1986) pointed out a variety of techniques

for managers to adversely affect the open-market stock price. Perry and Williams (1994) employed a sample of 175 MBO cases during 1981-1988 and found that discretionary accruals are negative in the year preceding the MBO. Wu (1996) examined 87 MBO cases during 1980-1987 and found that managers manipulated earnings downward prior to the MBO proposal.

As for the market performance, Morck, Shleifer and Vishny (1988) reported a nonmonotonic relationship between management ownership and market valuation (Tobin's Q). Tobin's Q first increases, then declines, and finally rises slightly as ownership by the board of directors rises, which reflected weakened insider controlling and probable exploitation at a certain amount of management shareholding.

2.2. MBO in China

Due to the special corporate ownership structure in China, MBO is a sensitive event closely related with SOE restructuring and state-owned assets transfer. The practice of MBO has aroused public outcry because many state assets have been sold off at huge discounts in irregular ways to powerful managers. Lang (2006), by examining typical MBO cases, disclosed the truth behind China MBO transactions which involved all kinds of intrigues including financial manipulation, auction tricks, discounted sale of State assets, etc. He pointed out that the intrinsic nature of MBO in China is fundamentally different from that in the US.

At the same time China government constituted a series of policies to regulate share

transfer of state assets and MBO, which reflected the policy maker's progressive understanding on the issue.

- In Mar 1997 the predecessor of State-Owned Assets Supervision and Administration Committee (SASAC) prescribe that the transfer price of state shares must not be lower than net asset value.
- In Mar 2003 the Ministry of Finance (MOF) prohibited MBO of China SOEs.
- In Dec 2003 the SASAC issued strict regulation on the restructuring of SOEs and MBO, including proper financial auditing of the management team's performance, inviting independent intermediary agencies to participate in drafting MBO plans, undergoing bidding procedures on property right markets, and forbidding management teams from using State assets as collateral to secure bank loans and purchasing more State assets.
- In Apr 2005, the SASAC tightened the rules on MBO and stipulated only small and medium sized companies can operate MBO; the management can not entrust any third party to accept the shares.
- In Jan 2006 the regulations on MBO was revised; prohibition of MBO on large scale SOEs was removed but remain under strict restraints.

Empirical research on wealth effect and earning performance of China MBO companies is relatively less than the US. Most of the research is conducted in 2003-2005 when there are not yet sufficient MBO cases. Major findings are inconclusive.

On the wealth effect of MBO, there is no remarkable result. Yi (2003), using a sample of 18 MBOs from 1990 to 2002, found an average CAR of 0.49% in a (-2,2) window around the MBO announcement days, 2.92% in (-10,1) window and − 0.9% in (0,10) window. Feng and Dai (2005) collected 42 MBO announcements of 34 firms during 1997-2003 and reported no significant abnormal returns for both short and long windows around the MBO announcements.

For the operating performance, Yi (2003) used earning per share (EPS) as the measure and found an increase of EPS by 18.9% and 22.1% in the year before and of MBO, but -23.87% in the year after the MBOs, indicating no operating improvement.

The justifiability of MBO pricing in China is examined by researchers. In many cases the compensations of MBO in China are measured with net asset value. Yi (2003) found that 50% of the firms' net assets decreased before the MBO announcements, and after the MBO announcements, 11.12% still decreased, 38.88% increased. Feng and Zhang (2005) used the present value of the free cash flow of equity (FCFE) to price the non-tradable share and found the discounted value significant higher than the acquired prices, which suggested that the management might manipulate the net asset value before the MBO.

3. Data selection and sources

There is no consensus on the MBO sample in China. It is a difficult job to identify the MBO cases in China. Due to the sensitivity of SOE restructuring and state-owned assets diversion, the MBO transactions in China are not as apparent as in

western countries. The management usually purchases shares of the company or its parent company under the cover of "shell" company or ESOP (Employee Stock Ownership Plans) to indirectly control the company. Some of the transactions are not regarded as MBO until revealed by media disclosure after the event.

We made a screening of the Chinese listed companies that were reported to have conducted MBO and check the share transaction in public announcement. The final sample includes those MBO transactions satisfying at least one of the following criteria:

1) The management purchase over 10% stake of the company or

2) A single manager purchase over 1% stake of the company or

3) Management acquire the control right of over 5% via the "shell" company.

We impose the first 2 criteria to distinguish MBO from the management incentive mechanism and the last one to indicate that management could impose significant influence over the company.

Finally we collected 114 MBO announcements of 85 Chinese listed companies during 1997-2007 (see Table 1). Some companies completed MBO in several steps. Transaction information is collected from public announcement of listing companies.

Daily return of equity and market are obtained from CSMAR database implemented by Bloomberg.

4. Announcement effect of MBO

4.1. Research method

The method used to estimate the announcement effect of MBO is the event-time methodology which is also used in DeAnglo, DeAnglo and Rice (1984) and Hite and Vetsuypens (1989). We examine the cumulated abnormal return (CAR) around the buyout announcement day to detect the announcement effect. For each firm i, we calculate the prediction error for day t as:

$$PE_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt})$$

where

R_{it} = the rate of return on stock i for event day t and

R_{mt} = the rate of market return on the CSMAR free-float weighted index for event day t.

The coefficient $\hat{\alpha}_i$ and $\hat{\beta}_i$ are the ordinary least squares estimates of the intercept and slope of the market model regression. The market model regression was estimated for each firm from t=-120 to day t=-20 relative to the buyout announcement date t=0.

We select the window of [-1,1] and [-5,5] around announcement day as investigation period of CAR. The former represents the immediate effect and the latter could reflect a continuing effect eliminating the influence caused by limit of daily price change in China stock market.

4.2. Group division of MBO companies

4.2.1. Division rules

We divided the initial announcement of MBO of 85 companies into 6 groups (sample size in the brackets):

- Apparent MBO (47): the MBO could be identified from the public announcement, except the cases of founder buyout.
- Veiled MBO (15): no signs of MBO in the announcement, but revealed to be MBO afterwards.
- Late announcement (8): announced after the event period, usually briefly reported in annual reports or non-tradable-shares reform reports.
- Subsidiary disposal (8): MBO of subsidiary.
- Founder buyout (6): the buyouts are proposed by founder of the company. Usually the manager has been shareholder and real controller of company before the transaction.
- Close to Non-tradable-shares Reform (1): the MBO is conducted within 1 month before or after NTS Reform and the announcement effect is interfered by NTS Reform effect.

Student t test and Wilcoxon test on the CAR post interesting results (See Table 3). For the entire sample, mean and median of CAR are insignificant positive. Significant results come from two groups: apparent MBO and founder buyouts.

4.2.2. Apparent MBO: significant negative

For apparent MBO the CAR[-1,1] and CAR[-5,5] are both significant negative which reflect investors' pessimistic attitude towards MBO.

Due to the special share structure of SOE in China, the shares that management acquires are mostly State Shares and Legal Shares, which are not tradable in secondary market. Thus the MBO do not involve in secondary market action. Investors could not get acquisition premium as in the US, but have to bear wealth loss caused by the negative return. To some extent the market effect indicates investors' pessimistic view of future profitability. In addition the transfer prices of some MBO cases are rather low which are regarded as discounted sale of state-owned-assets. We will discuss it in detail in section 5.

4.2.3. Founder buyouts: significant positive

For founder buyouts the CAR[-1,1] and CAR[-5,5] are both significant positive which reflect investors' acceptance of founder-controller.

Since the founders are usually pathfinder of the company and have sufficient track record to prove their capacities and executive power, the founders' acquisition for controlling shares could be regarded as a positive signal of smooth operation and promising earning growth.

4.2.4. Other groups: insignificant positive but not representative for MBO effect

For the other groups, the CAR is insignificant positive. Unlike the apparent MBOs, these groups may have announcement effect interfered by other information. For example, CAR of those with late announcement and close to NTS Reform may include financial report effect and event-driven effect by NTS reform (Huang, Su and Chong (2008)). Veiled MBO is easily confused with general acquisition or trusts

which hide the real identity of management from the public and thus the CAR could not represent the real announcement effect of MBO. For the MBO of subsidiaries we would rather call it subsidiary disposal due to little influence to the operation of listing company. Therefore the group of apparent MBO is the most representative sample for announcement effect from which investors could properly conceive the nature of transaction.

4.3. Factor analysis

To study the influence of different variables on announcement effect of MBO, we analyze the sample of apparent MBO with the following factors: announcement year, underlying asset, ESOP participation, competitive purchaser, and MBO results. Since they are all dummy variables in our sample, we not only conduct statistic tests to examine the significance of CAR for every variable state but also test the difference of CAR when the variable changes. (See Table 4)

4.3.1. Year: before 2003/ after 2003 (include 2003).

In March 2003 the MoF prohibited MBO and nine months later SASAC issued Regulations on Restructuring of SOEs which first specified the regulations on management buyout. We consider it the watershed of government and public attitude towards MBO.

In our sample, 18 companies announced MBO before 2003 and 29 after 2003 (include 2003). Student t test and Wilcoxon test show that apparent MBO after 2003 release significant negative CAR in both [-1,1] and [-5,5] window while those before 2003

have insignificant negative CAR. In particular CAR[-1,1] of MBO after 2003 is significantly more negative than those before 2003.

The government's ban on MBO was a sudden strike that officially clarified the disapproval attitude. The announcement effect remarkably reflects the common awareness of the harm caused by MBO since 2003.

4.3.2. Underlying asset: parent company / the listing company itself.

To control a company, the management could either purchase shares of listing company or acquire shares of its parent company. It will be examined whether the direct shareholding and indirect controlling may result in different announcement effect.

Among apparent MBOs, 31 are realized through parent company acquisition and 16 are buyouts of listing company. Empirical results show that the management buyouts acquiring parent companies have significant negative CAR in both windows and are significantly more negative than those using direct purchase of listing companies in window of [-1,1].

The results are in line with our expectation since the share acquisition of parent companies is not as transparent as direct MBO of listing companies. The ratio of control right/share stake is usually larger than 1 through controlling chain which could be rather complicated. Furthermore the fairness of share pricing of parent companies is difficult to judge due to limited disclosure of interests about parent companies. Therefore MBOs of parent companies are considered to be more corruptive.

4.3.3. ESOP participation: Yes/No.

ESOP (Employee stock ownership plan) is a kind of employee benefit plan covering not only the management but also general employees. Some cases of MBO are conducted under the name of ESOP and actually the leader of ESOP Association, usually the top management, could obtain the controlling right over company.

In the sample of apparent MBO, the deals participated by ESOP amount to 17 cases. Empirical results show that group of MBO without ESOP have significant negative CAR while group of MBO with ESOP have negative CAR on average but insignificant. The former is significantly more negative than the latter in window of [-5, 5].

Therefore the participation of ESOP could be regarded as a less negative factor in MBO. A possible reason is that ESOP was believed to be a good incentive for both management and employees which may lead to overall high operating efficiency.

4.3.4. Competitive purchaser: Yes/No.

During the transferring of shares, the transaction seems to be more transparent and fair with the presence of competitive purchaser. However most MBO are conducted based on negotiation between vendor and purchaser (the management) without public competition.

In our sample, only 6 MBO cases are involved with competitive purchaser. Compared with others without competitors, the 6 deals have greater negative CAR. A possible

reason is that investors believe the outside purchasers are not acquainted with the company and may destroy it if they acquire control right. However we would not conclude that competitive purchaser is a negative factor to announcement effect due to the small sample of competitive MBO.

4.3.5. Results: Success / Failure.

The transferring of State Shares and Legal Shares of SOEs should get approval from the government and/or CSRC. Some were defeated because of certain considerations. Generally speaking, it is unknown whether it will success or not when MBO is initially announced.

We test the CAR to see if it will give any indication for the results of MBO. The group of failure is a small sample with 6 constitutes. It is shown that both groups have negative average CAR and the failed MBO has greater negative mean and median than successful MBOs in both windows. We infer that the failed deals may include some unreasonable terms that disappointed the investors and thus be denied by regulation institutions.

4.3.6. Correlation between the factors

We calculate the correlation of the above five factors to examine whether there is any intrinsic relationship between them. All the factors are represented by dummy variables and the state leading to more negative effect is set to be 1. (See Table 5)

The largest correlation is 0.73 between year and underlying assets. Before 2003 77.8% of the MBO deals adopt the share transfer of listing companies. Since the MoF prohibited MBO in 2003, however, 93.1% of the deals employ the share acquisition of parent companies (See Table 6). It could be inferred that the share acquisition of parent companies is an evasive strategy against the government prohibition.

The correlation between other dummy variables are no larger than 0.2, indicating no significant relevance among others.

4.4. Summary of announcement effect

Apparent MBO have significant negative CAR around initial announcement date which indicates investor's pessimistic attitude towards MBO. However the founder buyouts have positive announcement effect reflecting the public approval of founder-controller. Among apparent MBOs, the following factors may lead to more negative announcement effect: conduct year after 2003, share purchase of parent company and no participation of ESOP.

5. Evidence on profitability and pricing

In last section it is demonstrated that investors hold pessimistic attitude towards MBO. Why? On the one hand, since stock price mainly reflect the investors' expectation about future profitability of the company, the negative announcement effect indicates investor's misgivings about the post-MBO earning capacities. On the other hand, unfair price of share transferring could also cause abnormal fluctuation of stock price. In this section we will test whether there are any profitability changes and price

manipulation around MBO.

5.1. Data and methodology

In this section our research sample includes all types of MBO companies except subsidiary MBO. The reason that we exclude subsidiary MBO is the infeasibility to follow the results of those MBO targets (the subsidiaries of listing companies) from financial reports of listing companies. In other words, we are focusing on the earning and asset change of MBO targets. This sample includes 77 listing companies.

Data source

All the A share listcos in Shanghai and Shenzhen exchanges are extracted from CSMAR by classification of CSRC industry code. We will compare various financial measures between MBO companies and their peers of the same industry.

Variables

We construct two variables for each financial measure. The first, which is called industry adjusted variable, uses the company measure contracted by industry median to indicate the company ranking within industry (outperformer or underperformer). And the second, which is called change in industry adjusted variable, uses the difference of industry adjusted variable between current year and last year to reflect the change of company compared with itself year by year. The second variable methodology is similar as Wu (1997).

For example, we construct the following variables in ROE test:

$$ADJROE_{i,t} = ROE_{i,t} - ROE_{m,t}$$

$$DADJROE_{i,t} = ADJROE_{i,t} - ADJROE_{i,t-1}$$

where

$ROE_{i,t}$ = firm i's ROE at year t

$ROE_{m,t}$ = the median $ROE_{i,t}$ for the CSRC industry.

To strip out industry factor each variable is adjusted by contracting industry median value. $ADJROE_{i,t}$ is an absolute variable to indicate the company performance compared with industry and $DADJROE_{i,t}$ is a relative variable to reflect the performance change year by year.

Observation window

The observation window is set to be five-year respectively before and after MBO. It should be noted that in some cases MBO lasts for more than one year (from initial announcement of MBO intention to the announcement of MBO completion) and the window starts 5 years before the beginning year of MBO and ends 5 years after the completion year.

The event year T is the completion year for successful MBO and announcement year of failure for failed MBO. For the losers who did not announce their failure, T is set to be the initial announcement year.

Statistic tests

We conduct Student t test and Wilcoxon test to observe whether the MBO companies have significantly different performances for the financial measures. Before statistic tests, we remove some abnormal observations to mitigate the interference of noises. The methodology is to abandon the observations that are beyond the distance of double variation from the average and repeat once more.

5.2. Profitability of MBO companies

MBO in China is boosted as company restructuring and management incentive. Since the management usually knows the company well and could carry out smooth transition after takeover, MBO are supposed to bring better profitability. Could MBO really improve the profitability of company?

Return on equity is an important ratio to measure the earning capacity of a company. We use this measure to investigate the profitability change around MBO events. (See Table 7 and Table 8)

The results indicate no improvement of profitability, if not worse. From T-4 to T+2 the overall industry adjusted ROE (ADJROE) are significant positive which indicates that the MBO companies outperform the industry. Since T+4, however, the mean and median both turned into negative, which implies that the companies underperform the industry.

As for the change in industry adjusted ROE (DADJROE), the average and median are positive in T-1. After MBO completion, however, a majority of the observations are negative. In particular it is significantly negative for the first year after MBO.

In other words, the companies to conduct MBO were originally good firms with higher ROE than the industry average. After MBO, however, the ROE increase becomes slower than industry level and the advantage gradually disappears. Since the 4th year after MBO, the companies on average turned from industry outperformer to underperformer. We could infer that the profitability do deteriorate after MBO which verifies investor's misgivings.

Another interesting result is the difference between successful MBO companies and failed ones. The former have significant positive ADJROE from T-4 to T but the later do not. As a matter of fact the losers have negative mean and median of ADJROE during this period which indicates that they are industry underperformers. Thus we could suppose that companies with poor profitability are difficult to get approval on MBO.

5.3. DuPont analysis of companies with successful MBO

To follow up the ROE results, we conduct DuPont analysis to recognize the underlying drivers for the change of profitability. We utilize the three-factor DuPont system as following:

$$ROE = Net\ Margin * Asset\ Turnover * Equity\ Multiplier$$

To concentrate on the post-MBO performance, we focus on the sub sample of successful MBO transactions, which includes 69 companies in total. The net margin, asset turnover and equity multiplier are tested individually for industry adjusted ratios and annual changes. (See Table 9 and Table 10)

The net margin performance is entirely different before and after the MBO event. Before MBO, the companies have significant higher margin than the industry average. But after MBO, the advantage disappears with net margin largely in line with the industry average. Moreover the test results on annual changes suggest that the net margin significantly decreases for the first two years immediately after MBO, which reflected rising expenses and poor inside controlling.

The asset turnover performance is quite similar as the net margin. The companies have significant outperforming asset turnover before MBO, but lose their superiority thereafter. The annual change in risk adjusted asset turnover acts even more quickly, which turns into significantly negative just in the event year and remain so for the following year.

The test on equity multiplier posts a remarkable result that the leverage has kept increasing ever since one year before MBO. Before T-2, the leverage ratio of MBO companies is largely in line with industry average. But since the transaction completion year, it becomes significantly higher than the industry. In particular the annual change data demonstrated significant increase of equity multiplier during T-1 to T+3, reflecting an abnormal accelerated accrual of liability. This is not an advantage for the company due to Lang, Ofek and Stulz (1996) which reported negative relation between leverage and future growth.

The DuPont analysis provides further clarity on profitability consequences of successful MBO: lower net margin, lower asset turnover, and higher leverage ratio, after adjusted by industry average. All the changes are unfavorable signals for the

profitability of company, leading to weakened earning capability and sluggish future growth. Moreover the increasing leverage put heavy debt burden on the company which may result in financial crisis and harm the interests of minority shareholders. The empirical results demonstrate that MBO in China did not improve the company profitability as boosted, but caused weakened earning capacity and rising financial risk.

5.4. Dividend payment

Dividend policy is an important part of the operating strategy of a company. Dividend payout of MBO companies is especially concerned by the public as this is the most direct way for the management to acquire cash benefits from shareholdings. We test two dividend ratios, the payout ratio and dividend yield, to see whether there is any particular characteristics in the dividend policy of companies that have completed MBO. (See Table 11 and Table 12)

The dividends paid by post-MBO companies are impressively higher than the industry level, both in the measure of dividend payout ratio and dividend yield. In the MBO completion year, the dividend payout ratio significantly surges up 16.6ppt on average over the industry level. The remarkably high payout ratio maintains for the subsequent three years.

The aggressive dividend payout is not a moderate strategy for company growth (Faccio, Lang and Young (2001)). Large amount of cash payout would decrease the cash position and cut down reinvestment in operation activities. Indistinctive ROE

and extraordinary high dividend payout predestinate inferior earning capacity. It is possible that the management is anxious to receive cash-out from the company to cover the repayment of MBO financing. But the pursuance of quick benefits would greatly undermine the long-term earning growth of the company. An insider trading around dividend announcement may also cause deficiencies. (John and Lang (1991)).

5.5. Shareholder's returns

Different from non-tradable shareholders, the secondary-market investors are more concerned about stock price returns. Thus we examine the post-MBO performance of annual holding returns, as well as the revenue and earning growth. (See Table 13 and Table 14)

It is found that the total stock returns outrun the industry for the first two years after MBO completion, which is probably motivated by the superior top and bottom line growth. Since the 3rd year the operating advantages pass off and the holding return becomes indifferent to others.

In addition, the revenue and earning growth before MBO is notably higher than the industry level but incurred significant decrease after MBO, which double confirms our judgment of deteriorating operations after MBO.

A special caption here is that we interpret the total return change with illustration of revenue growth and earning growth, but do not indicate any consequential relationship between stock returns and operating results. Good operating results may spur stock price but do not necessarily result in higher growth.

5.6. MBO pricing and pre-MBO behavior of NAV

According to the regulations issued by SASAC in 1997, state assets must not be transferred at the price lower than net asset value (NAV). Since then NAV is the common measure of state assets and over half of MBO transactions in China are priced with NAV. We conduct a test to observe pre-MBO behavior of NAV. (See Table 15 and Table 16)

MBO companies have significant higher growth of NAV than industry level from T-4 to T, which again confirms our inference that the companies were industry outperformers before MBO. The average change in NAV growth has kept negative from T-3 and T-1, but turns into positive in T. In T-1 it is even significant negative. This is especially obvious in the group of listing company MBO with NAV pricing. Recalling the discussion of leverage ratio in DuPont analysis, the increasing leverage also implicates a decreasing net asset ratio, which is consistent with our findings.

The empirical results suggest that the companies under MBO plan were industry outperformers with fast growth of NAV. Since three years before MBO, however, their average growth in excess of industry average keeps decreasing. In particular the growth incurs significant decrease in the year before MBO. This is an obvious signal of net asset value manipulation before MBO leading to a lower price in share transfer. It is reasonable that the manipulated share price of MBO transaction would provoke abnormal change of stock price.

6. Conclusion

We collected the announcement information of 114 MBO transactions of 85 China listing companies during 1997-2007. The initial announcement effect of apparent MBO is significant negative, reflecting investors' pessimistic attitude towards MBO. Some factors may lead to more negative announcement effect, including announcement year after 2003, acquisition of parent company, no ESOP participation, etc. The negative attitude comes from two main concerns: profitability and share transfer price. Empirical results suggest that the MBO companies, which were originally good firms with outperforming profitability, incur lower net margin, lower asset turnover, increasing leverage ratio and extraordinary high dividend payout after MBO, which severely undermines the earning capacities. The net asset value is found to be significantly manipulated down before MBO which is probably meant to depress the transfer share price in MBO transaction.

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Table 1. MBO of China listing companies (to be continued)

Ticker	Name	Annouce-ment date	Underlying asset	ESOP	Succeed /Fail	Compe-tetion	Acquired stake (%)	Control right (%)	Type
000009	深宝安	20060109	parent	N	succeed	N	11.64	11.64	Close to NTS Reform
000023	深天地A	20030226	parent	Y	succeed	N	29.68	40.00	Apparent MBO
000023	深天地A	20071031	parent	Y	succeed	N	6.76	33.81	Apparent MBO
000035	中科健	20031017	parent	N	succeed	Y	29.01	29.01	Apparent MBO
000049	德赛电池	20040203	parent	Y	succeed	N	30.14	61.52	Late announcement
000055	深方大	20010620	self	Y	succeed	N	33.10	44.70	Apparent MBO
000062	深圳华强	20031009	parent	N	succeed	N	47.78	52.50	Apparent MBO
000157	中联重科	20041118	parent	N	succeed	N	2.94	5.90	Apparent MBO
000157	中联重科	20060331	parent	N	succeed	Y	12.01	30.00	Close to NTS Reform
000301	丝绸股份	20031204	parent	N	fail	N	62.44	62.44	Apparent MBO
000407	胜利股份	20020917	self	N	succeed	N	6.85	6.85	Apparent MBO
000407	胜利股份	20021112	self	N	succeed	N	10.80	17.65	Apparent MBO
000513	丽珠集团	20010105	self	Y	fail	N	12.72	12.72	Apparent MBO
000513	丽珠集团	20010926	self	Y	succeed	N	3.57	7.31	Apparent MBO
000527	美的电器	19990604	self	N	succeed	N	7.98	7.98	Apparent MBO
000527	美的电器	20000419	self	Y	succeed	N	7.26	15.75	Apparent MBO
000527	美的电器	20010119	self	Y	succeed	N	14.94	30.69	Apparent MBO
000533	万家乐	20010529	self	N	succeed	N	18.72	18.72	Apparent MBO
000533	万家乐	20010608	self	N	succeed	Y	6.22	24.94	Apparent MBO
000542	TCL通讯	20020417	self	Y	succeed	N	25.00	25.00	Late announcement
000571	新大洲A	20050218	parent	N	succeed	N	4.08	15.09	Late announcement
000585	东北电气	20040909	parent	N	succeed	N	21.59	26.34	Apparent MBO
000585	东北电气	20050518	parent	N	succeed	N	8.22	26.34	Apparent MBO
000619	海螺型材	20040222	parent	Y	succeed	N	16.87	42.50	Apparent MBO
000623	吉林敖东	20021101	self	N	succeed	N	16.26	26.64	Veiled MBO
000661	长春高新	20031217	subsidiary	N	succeed	Y	–	–	Subsidiary disposal
000667	名流置业	20070611	parent	N	succeed	N	7.53	18.82	Apparent MBO
000672	铜城集团	20041227	self	N	fail	N	25.96	25.96	Veiled MBO
000677	山东海龙	20040907	self	N	succeed	N	8.75	8.75	Apparent MBO
000677	山东海龙	20041207	self	N	succeed	N	20.47	29.22	Apparent MBO
000683	天然碱	20051227	self	N	succeed	N	26.52	26.52	Veiled MBO
000725	京东方A	20040529	parent	N	succeed	Y	15.71	35.91	Apparent MBO
000735	罗牛山	20040207	parent	Y	succeed	N	15.45	15.45	Apparent MBO
000780	草原兴发	20020307	parent	N	succeed	N	12.65	24.81	Veiled MBO
000780	草原兴发	20031008	parent	N	succeed	N	25.29	50.10	Veiled MBO
000790	华神集团	20040701	self	N	succeed	N	28.13	28.13	Veiled MBO
000869	张裕A	20041102	parent	N	succeed	Y	24.23	45.00	Apparent MBO
000895	双汇发展	20030617	self	N	succeed	N	25.00	25.00	Veiled MBO
000910	大亚科技	20041220	parent	N	succeed	N	11.83	29.58	Founder buyout
000922	阿继电器	20021207	subsidiary	N	succeed	N	–	–	Subsidiary disposal
000925	浙大海纳	20030108	subsidiary	N	succeed	N	–	–	Subsidiary disposal
000939	凯迪电力	20031223	self	N	succeed	N	13.40	13.40	Veiled MBO
000973	佛塑股份	20020801	self	N	succeed	N	29.46	29.46	Apparent MBO
000995	皇台酒业	20050828	self	N	succeed	N	29.00	29.00	Late announcement
600066	宇通客车	20010525	self	N	succeed	N	8.70	8.70	Apparent MBO
600066	宇通客车	20010622	parent	N	fail	N	15.44	17.19	Apparent MBO
600066	宇通客车	20040105	parent	N	succeed	N	17.19	17.19	Apparent MBO
600084	新天国际	20001205	self	Y	fail	N	14.92	14.92	Apparent MBO
600089	特变电工	20020926	self	N	succeed	N	11.46	11.46	Apparent MBO
600089	特变电工	20030129	parent	N	succeed	N	16.18	27.64	Apparent MBO
600105	永鼎光缆	20020405	parent	N	succeed	N	37.07	49.86	Apparent MBO
600152	维科精华	20030311	parent	Y	succeed	N	11.44	32.36	Veiled MBO
600152	维科精华	20060816	parent	N	succeed	N	11.26	24.28	Apparent MBO
600162	山东临工	20021227	self	N	succeed	N	27.06	27.06	Veiled MBO
600162	山东临工	20070203	subsidiary	N	succeed	N	–	–	Subsidiary disposal
600186	莲花味精	20060601	self	N	succeed	N	8.85	8.85	Veiled MBO
600193	创兴科技	20021114	parent	N	succeed	N	32.71	49.59	Apparent MBO
600200	江苏吴中	20030917	parent	N	succeed	N	21.70	36.16	Apparent MBO
600201	金宇集团	20050630	parent	Y	succeed	N	11.47	24.99	Apparent MBO

Table 1. MBO Sample of Chinese listed companies

Ticker	Name	Annouce-ment date	Underlying asset	ESOP	Succeed /Fail	Compe-tetion	Acquired stake (%)	Control right (%)	Type
600216	浙江医药	20060426	parent	N	succeed	N	29.65	29.65	Late announcement
600237	铜峰电子	20031013	parent	N	succeed	Y	7.20	7.70	Apparent MBO
600237	铜峰电子	20040325	parent	N	fail	N	14.80	22.70	Apparent MBO
600238	海南椰岛	20050205	self	N	succeed	N	6.03	6.03	Veiled MBO
600257	洞庭水殖	20020204	self	N	succeed	N	13.65	29.90	Apparent MBO
600267	海正药业	20040227	parent	N	succeed	N	22.15	39.86	Apparent MBO
600275	武昌鱼	20050427	parent	N	succeed	N	16.91	27.12	Late announcement
600276	恒瑞医药	20030325	self	N	succeed	N	37.15	37.15	Apparent MBO
600276	恒瑞医药	20060224	self	N	succeed	N	6.00	43.15	Apparent MBO
600295	鄂尔多斯	20021016	parent	N	succeed	N	18.84	43.80	Apparent MBO
600297	美罗药业	20040112	parent	N	succeed	N	32.96	52.00	Veiled MBO
600308	华泰股份	20051123	parent	N	succeed	N	17.91	29.85	Apparent MBO
600319	亚星化学	20041231	parent	N	succeed	N	21.99	44.87	Late announcement
600351	亚宝药业	20041012	parent	N	succeed	N	16.68	23.83	Apparent MBO
600370	三房巷	20060316	parent	N	succeed	N	34.74	63.62	Apparent MBO
600400	红豆股份	20031202	parent	Y	succeed	N	12.04	70.27	Founder buyout
600449	赛马实业	20051116	parent	N	succeed	N	27.79	27.79	Apparent MBO
600486	扬农化工	20030401	parent	Y	succeed	N	26.33	55.79	Apparent MBO
600502	安徽水利	20040305	parent	N	fail	N	27.14	27.14	Apparent MBO
600522	中天科技	20050204	parent	N	succeed	N	25.20	38.00	Apparent MBO
600522	中天科技	20050720	parent	N	succeed	N	10.29	57.40	Late announcement
600522	中天科技	20060426	parent	N	succeed	N	7.35	57.40	Late announcement
600522	中天科技	20060829	parent	N	succeed	N	7.28	48.90	Apparent MBO
600531	豫光金铅	20040909	parent	N	fail	Y	29.03	51.00	Apparent MBO
600533	栖霞建设	20040825	parent	Y	succeed	N	23.80	48.57	Apparent MBO
600557	康缘药业	20040209	self	N	succeed	N	8.46	25.39	Founder buyout
600557	康缘药业	20041229	self	N	succeed	N	0.52	25.39	Founder buyout
600557	康缘药业	20050808	self	N	succeed	N	8.65	34.04	Founder buyout
600557	康缘药业	20050926	self	N	succeed	N	9.50	43.54	Close to NTS Reform
600572	康恩贝	20041029	parent	N	succeed	N	2.69	30.13	Founder buyout
600572	康恩贝	20041126	parent	Y	succeed	N	12.05	30.13	Apparent MBO
600585	海螺水泥	20040222	parent	Y	succeed	N	24.29	49.00	Apparent MBO
600585	海螺水泥	20060822	self	Y	succeed	N	8.65	48.09	Apparent MBO
600586	金晶科技	20040922	parent	N	succeed	N	31.59	61.95	Veiled MBO
600595	中孚实业	20051231	parent	Y	succeed	N	6.35	21.20	Apparent MBO
600606	金丰投资	20021018	subsidiary	N	succeed	N	–	–	Subsidiary disposal
600606	金丰投资	20030317	subsidiary	N	succeed	N	–	–	Subsidiary disposal
600606	金丰投资	20030422	subsidiary	N	succeed	N	–	–	Subsidiary disposal
600606	金丰投资	20041124	subsidiary	N	succeed	N	–	–	Subsidiary disposal
600611	大众交通	19990525	self	Y	succeed	N	5.21	23.41	Apparent MBO
600635	大众公用	19970507	self	Y	succeed	N	18.07	20.08	Apparent MBO
600645	望春花	19980303	self	Y	succeed	N	9.60	9.60	Apparent MBO
600662	强生控股	20020208	parent	Y	succeed	N	11.50	32.87	Late announcement
600668	尖峰集团	20001225	self	N	fail	N	31.62	38.36	Veiled MBO
600668	尖峰集团	20030902	subsidiary	N	succeed	N	–	–	Subsidiary disposal
600671	天目药业	20000629	parent	Y	fail	N	30.16	45.03	Apparent MBO
600682	南京新百	20030815	subsidiary	N	fail	N	–	–	Subsidiary disposal
600683	银泰股份	20020921	parent	N	succeed	N	3.43	21.41	Founder buyout
600684	珠江实业	20040823	subsidiary	N	fail	N	–	–	Subsidiary disposal
600734	实达电脑	20040906	subsidiary	Y	fail	N	–	–	Subsidiary disposal
600768	宁波富邦	20021104	self	Y	succeed	Y	21.53	28.70	Apparent MBO
600779	全兴股份	20030215	parent	Y	succeed	N	38.75	48.44	Veiled MBO
600823	万象集团	20010115	subsidiary	N	succeed	N	–	–	Subsidiary disposal
600868	梅雁水电	20041014	parent	Y	succeed	N	2.42	10.39	Apparent MBO
600884	杉杉股份	20070321	parent	N	succeed	N	11.82	36.71	Founder buyout

Table 2. Descriptive statistics for the announcements of MBO in China during 1997-2007

The sample consists of 114 MBO announcements of 85 China listing companies covering the period of 1997-2007. We made a screening of the Chinese listed companies that were reported to have conducted MBO and check the share transaction in public announcement. The final sample includes those MBO transactions satisfying at least one of the following criteria: (1) The management purchase over 10% stake of the company or (2) A single manager purchase over 1% stake of the company or (3) Management acquire the control right of over 5% via the "shell" company.

Panel A: Descriptive statistics

Descriptive statistic	Mean	Median
Market cap (in RMB mn)	2,797.62	1,947.60
Free float (in RMB mn)	1,009.73	852.09
Percentage of Free float	40.89	39.62
Total assets (in RMB mn)	2,203.73	1,579.23
Shareholder's equity (in RMB mn)	863.07	650.29

Panel B: Calendar profile

Year	Number of annoucements	Mean market cap (RMB mn)	Mean free float (%)
1997	1	3712.30	44.44%
1998	1	322.79	22.12%
1999	2	4271.31	31.50%
2000	4	3888.87	49.44%
2001	9	4089.95	45.07%
2002	17	2539.10	43.39%
2003	21	2216.21	42.34%
2004	31	2996.78	36.65%
2005	14	1105.20	40.29%
2006	10	3299.13	39.43%
2007	4	4444.83	51.96%

Table 3. CAR of initial announcement of MBO

The sample consists of 85 initial announcements of MBO. The conventional event-time methodology is used to estimate the market effect. In the column of "Number", the figures in black represent the sample size and figures in grey imply the number of events with positive CAR v.s. the number of events with negative CAR. In the column of "Mean" figures in black are average CAR (%) of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median CAR (%) of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

	CAR[-1,1]			CAR[-5,5]		
	Number	Mean	Median	Number	Mean	Median
All	85 46:39	0.16 (0.37)	0.14 (1870)	85 56:58	0.47 (0.48)	-0.43 (1808)
Apparent MBO	47 20:27	-0.89 (-2.04) **	-0.72 (390) **	47 16:31	-2.26 (-2.71) ***	-0.97 (342) ***
Veiled MBO	15 9:6	0.79 (0.73)	1.48 (60)	15 9:6	3.12 (1.75) *	1.36 (87) *
Late Annoucement	8 6:2	2.70 (0.99)	0.90 (26)	8 3:5	5.62 (0.76)	-1.20 (17)
Subsidiary Disposal	8 5:3	0.23 (0.23)	0.70 (19)	8 4:4	1.76 (0.54)	1.90 (21)
Founder buyout	6 5:1	2.45 (3.18) **	2.73 (20) **	6 6:0	5.65 (3.40) ***	5.52 (21) **
NTS reform	1 1:0	0.05	0.05	1 1:0	0.06	0.06

Table 4. CAR of initial announcement of Apparent MBO

The sample consists of 47 initial announcements of apparent MBO. The conventional event-time methodology is used to estimate the market effect. The difference between comparable groups is also tested. In the column of "Number", the figures in black represent the sample size and figures in grey imply the number of events with positive CAR v.s. the number of events with negative CAR. In the column of "Mean" figures in black are average CAR (%) of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median CAR (%) of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

		CAR[-1,1]			CAR[-5,5]		
		Number	Mean	Median	Number	Mean	Median
Apparent MBO		47 20:27	-0.89 (-2.04) **	-0.72 (390) **	47 16:31	-2.26 (-2.71) ***	-0.97 (342) ***
Year	Before 2003	18 7:11	-0.22 (-0.46)	-0.67 (69)	18 8:10	-1.20 (-1.05)	-0.22 (71)
	After 2003	29 13:16	-1.31 (-2.05) **	-0.72 (137) **	29 8:21	-2.92 (-2.54) ***	-2.58 (114) **
	Difference	—	1.10 (1.38) *	0.06 (296)	—	1.72 (1.07)	2.36 (303)
Underlying asset	Parent	31 13:18	-1.31 (-2.18) **	-0.72 (148) **	31 9:22	-2.38 (-2.29) **	-1.48 (140) **
	Self	16 7:9	-0.10 (-0.18)	-0.37 (61)	16 7:9	-2.03 (-1.41) *	-0.22 (49)
	Difference	—	-1.21 (-1.52) *	-0.36 (203)	—	-0.36 (-0.20)	-1.26 (236)
ESOP	Yes	17 6:11	-0.60 (-1.15)	-0.90 (52)	17 9:8	-0.38 (-0.28)	1.92 (70)
	No	30 14:16	-1.06 (-1.70) *	-0.66 (167) *	30 7:23	-3.33 (-3.26) ***	-2.49 (92) ***
	Difference	—	0.47 (0.58)	-0.24 (244)	—	2.95 (1.74) **	4.41 (327) *
Competitive purchaser	Yes	6 1:5	-4.24 (-2.13) **	-2.64 (1) **	6 1:5	-3.57 (-1.47)	-2.53 (3) *
	No	41 19:22	-0.40 (-1.10)	-0.60 (347)	41 15:26	-2.07 (-2.31) **	-0.97 (277) **
	Difference	—	-3.84 (-1.90) *	-2.04 (62) **		-1.50 (-0.58)	-1.56 (108)
Failure /success	Failure	6 1:5	-2.71 (-1.35)	-1.31 (4)	6 3:3	-2.41 (-0.85)	-1.75 (6)
	Success	41 19:22	-0.63 (-1.54) *	-0.64 (319) *	41 13:28	-2.24 (-2.56) ***	-0.97 (254) **
	Difference	—	-2.08 (-1.02)	-0.67 (88)		-0.17 (-0.06)	-0.78 (128)

Table 5. Correlation between variables

The sample consists of 47 initial announcements of apparent MBO. Every factor is represented by a dummy variable and the state in brackets is defined as 1. Pearson's correlation coefficients are displayed in the table.

	Year (>=2003)	Underlying assets (parent)	ESOP participation (no)	Results (fail)	Competitive Purchaser (Yes)
Year (>=2003)	1.00	0.73	0.14	-0.09	0.17
Underlying assets (parent)	0.73	1.00	0.11	0.01	0.14
ESOP participation (no)	0.14	0.11	1.00	-0.11	0.16
Results (fail)	-0.09	0.01	-0.11	1.00	0.04
Competitive Purchaser (Yes)	0.17	0.14	0.16	0.04	1.00

Table 6. Announcement year v.s. underlying assets

The sample consists of 47 initial announcements of apparent MBO. The vertical line illustrates announcement year and the horizontal line illustrates underlying asset. The number in table represents the number of companies that meet the year and underlying assets requirement.

	Parent	Self	Total
Before 2003	4	14	18
After 2003 (include 2003)	27	2	29
Total	31	16	47

Table 7. Statistics of industry adjusted ROE (ADJROE)

The sample consists of 77 companies conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ADJROE v.s. the number of effective events with negative ADJROE. In the column of "Mean" figures in black are average ADJROE (%) of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median ADJROE (%) of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	All			Success			Failure		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	37/42	-0.05	0.55	34/39	-0.10	0.28	3/3	0.54	1.51
	19:15	(-0.06)	(329)	17:14	(-0.13)	(270)	2:1	(0.34)	(4)
T-4	43/49	1.56	1.49	40/46	1.73	1.57	3/3	-0.74	-0.82
	26:13	(2.78) ***	(576) ***	26:10	(2.91) ***	(505) ***	0:3	(-2.07) *	(0)
T-3	58/65	1.69	0.91	54/60	1.85	1.25	5/5	-6.01	-0.42
	37:18	(2.84) ***	(1102) ***	35:16	(2.93) ***	(971) ***	2:3	(-1.09)	(4)
T-2	64/72	0.97	0.93	58/66	1.09	1.06	6/6	-0.23	-0.06
	36:26	(1.90) **	(1237) **	34:22	(1.96) **	(1031) **	2:4	(-0.29)	(9)
T-1	69/75	1.36	0.88	63/68	1.58	1.42	6/7	-0.92	-0.92
	42:25	(2.83) ***	(1559) ***	40:21	(3.06) ***	(1345) ***	2:4	(-1.65) *	(4)
T	70/74	1.61	1.16	64/68	1.65	1.24	6/6	1.19	1.14
	43:27	(2.19) **	(1611) **	38:26	(2.09) **	(1338) **	5:1	(0.72)	(16)
T+1	57/65	1.45	1.36	54/59	1.92	1.41	6/6	-0.48	1.11
	36:21	(2.05) **	(1036) **	34:20	(2.29) **	(966) **	4:2	(-0.29)	(10)
T+2	46/55	0.88	1.46	40/49	0.82	1.34	6/6	1.23	1.78
	27:19	(1.35) *	(676) *	23:17	(1.15)	(505)	4:2	(0.79)	(15)
T+3	37/40	0.71	1.19	33/36	1.34	1.72	4/4	-4.48	-3.42
	22:14	(0.70)	(387)	21:11	(1.29)	(336) *	1:3	(-1.62)	(2)
T+4	22/25	-0.68	-0.16	20/22	-1.81	0.56	3/3	-2.52	-2.50
	10:12	(-0.43)	(129)	10:10	(-0.80)	(107)	0:3	(-2.42) *	(0)
T+5	11/11	-2.24	-0.65	9/9	-2.14	-0.36	2/2	-2.68	-2.68
	4:7	(-1.31)	(19)	4:5	(-1.03)	(16)	0:2	(-1.32)	(0)

Table 8. Statistics of change in industry adjusted ROE (DADJROE)

The sample consists of 77 companies conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive DADJROE v.s. the number of effective events with negative DADJROE. In the column of "Mean" figures in black are average DADJROE (%) of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median DADJROE (%) of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	All			Success			Failure		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	27/32	-1.63	-1.10	24/29	-1.97	-1.87	3/3	1.09	-0.30
	6:19	(-2.60) ***	(77) **	5:17	(-3.02) ***	(46) ***	1:2	(0.64)	(3)
T-4	37/42	-0.43	0.63	34/39	-0.35	0.67	3/3	-1.28	-1.60
	20:15	(-0.55)	(305)	19:13	(-0.42)	(262)	1:2	(-0.77)	(2)
T-3	42/49	0.27	0.00	40/46	0.26	-0.03	3/3	-8.51	0.39
	20:20	(0.38)	(433)	18:20	(0.34)	(384)	2:1	(-0.94)	(3)
T-2	58/65	-0.25	-0.24	54/60	-0.35	-0.39	5/5	5.74	0.60
	25:33	(-0.46)	(808)	22:32	(-0.62)	(679)	4:1	(1.22)	(12)
T-1	65/71	0.28	0.16	60/65	0.43	0.42	5/6	-1.61	-1.55
	34:30	(0.52)	(1126)	33:26	(0.77)	(1020)	1:4	(-1.95) *	(1) *
T	67/73	-0.30	0.38	61/67	-0.54	0.35	6/6	2.11	1.68
	39:28	(-0.49)	(1166)	34:27	(-0.82)	(914)	5:1	(1.41)	(17)
T+1	59/65	-0.80	-0.18	54/59	-1.09	-0.16	6/6	-1.67	-1.78
	27:32	(-1.36) *	(771)	25:29	(-1.47) *	(657)	2:4	(-1.34)	(4)
T+2	46/55	-0.53	-0.23	40/49	-0.86	-0.58	6/6	1.71	0.44
	21:25	(-0.58)	(486)	18:22	(-0.84)	(336)	3:3	(1.33)	(14)
T+3	37/40	0.01	-0.98	33/36	0.53	-0.69	4/4	-4.35	-4.65
	14:23	(0.00)	(295)	14:19	(0.39)	(267)	0:4	(-4.08) **	(0) *
T+4	22/25	-1.88	-0.66	19/22	-2.36	-0.61	3/3	1.19	-0.70
	9:13	(-1.05)	(100)	8:11	(-1.19)	(71)	1:2	(0.30)	(3)
T+5	9/11	2.74	-1.11	8/9	7.89	0.32	2/2	-1.06	-1.06
	4:5	(0.96)	(23)	4:4	(1.54) *	(25)	1:1	(-0.93)	(1)

Table 9. Statistics of industry adjusted Dupont ratios

The sample consists of 69 companies successfully conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ratio v.s. the number of effective events with negative ratio. In the column of "Mean" figures in black are mean value of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median value of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	Net margin			Asset turnover			Asset/Equity		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	59/65	3.31	2.76	49/53	0.01	-0.02	61/65	0.08	-0.10
	39:20	(3.05) ***	(1224) ***	24:25	(0.37)	(609)	29:32	(0.97)	(1034)
T-4	61/68	1.79	1.70	60/65	0.08	0.01	63/68	0.01	-0.13
	42:19	(1.76) **	(1179) **	33:27	(2.10) **	(1139) **	29:34	(0.11)	(990)
T-3	60/69	1.89	2.44	60/68	0.04	0.04	63/69	-0.04	-0.17
	41:19	(2.16) **	(1204) **	34:26	(1.57) *	(1065)	25:38	(-0.53)	(868)
T-2	60/69	1.44	1.08	62/69	0.04	0.02	61/69	-0.11	-0.18
	35:25	(1.94) **	(1137) *	33:29	(1.31) *	(1116)	26:35	(-1.73) **	(690) **
T-1	64/68	1.05	-0.14	65/69	0.09	0.09	64/69	0.02	-0.11
	30:34	(1.73) **	(1217)	41:24	(2.72) ***	(1417) **	28:36	(0.32)	(1015)
T	63/68	-0.02	0.07	61/68	0.02	0.01	63/68	0.11	0.02
	32:31	(-0.03)	(1084)	33:28	(0.69)	(1024)	33:30	(1.58) *	(1133)
T+1	54/59	0.10	-0.22	56/60	-0.02	-0.01	54/60	0.14	0.07
	25:29	(0.13)	(765)	27:29	(-0.51)	(743)	31:23	(1.86) **	(908) *
T+2	45/50	0.45	0.26	46/50	0.00	0.00	45/50	0.20	0.08
	23:22	(0.54)	(552)	23:23	(0.06)	(536)	30:15	(2.65) ***	(725) ***
T+3	33/36	-0.17	-0.26	33/36	0.05	0.07	33/36	0.15	0.10
	16:17	(-0.17)	(267)	18:15	(0.81)	(308)	22:11	(1.93) **	(376) **
T+4	20/22	-2.56	0.12	19/21	-0.04	-0.04	20/22	0.28	0.19
	10:10	(-1.04)	(90)	8:11	(-0.62)	(80)	14:6	(2.15) **	(156) **
T+5	9/9	-0.02	-1.68	8/9	-0.08	0.00	9/9	0.76	0.28
	3:6	(-0.02)	(19)	4:4	(-0.70)	(16)	6:3	(1.63) *	(34)

Table 10. Statistics of change in industry adjusted Dupont ratios

The sample consists of 69 companies successfully conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ratio v.s. the number of effective events with negative ratio. In the column of "Mean" figures in black are mean value of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median value of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	Net margin			Asset turnover			Asset/Equity		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	47/53	-1.19	-1.30	36/40	-0.03	-0.03	48/53	0.19	0.18
	18:29	(-1.52) *	(451)	17:19	(-0.93)	(278)	36:12	(3.24) ***	(889) ***
T-4	57/65	-0.54	0.59	48/53	0.04	0.03	56/65	0.00	-0.01
	31:26	(-0.99)	(732)	31:17	(2.03) **	(755) **	26:30	(0.01)	(795)
T-3	62/68	-1.14	-0.87	56/65	-0.03	-0.04	57/68	-0.02	-0.01
	27:35	(-1.78) **	(743) *	21:35	(-1.88) **	(556) **	28:29	(-0.45)	(797)
T-2	57/69	-0.48	-0.11	59/68	-0.03	-0.02	59/69	-0.03	-0.03
	26:31	(-1.00)	(725)	26:33	(-2.03) **	(649) **	28:31	(-0.60)	(807)
T-1	59/68	-0.72	0.40	61/69	0.02	0.01	62/69	0.12	0.13
	33:26	(-1.34) *	(868)	33:28	(0.87)	(1042)	38:24	(2.35) **	(1301) **
T	62/67	0.19	0.30	60/68	-0.02	-0.02	63/68	0.10	0.07
	34:28	(0.30)	(1014)	25:35	(-1.55) *	(737) *	40:23	(2.94) ***	(1428) ***
T+1	54/59	-1.11	0.23	53/60	-0.03	-0.01	55/60	0.05	0.05
	29:25	(-1.32) *	(737)	24:29	(-2.34) **	(544) *	32:23	(1.74) **	(951) *
T+2	43/49	-0.89	0.30	46/50	-0.01	-0.00	44/50	0.07	0.09
	24:19	(-1.31) *	(450)	22:24	(-0.38)	(507)	27:17	(1.68) *	(615) *
T+3	33/36	0.30	0.18	36/36	0.02	0.01	30/36	0.05	0.05
	19:14	(0.37)	(315)	18:18	(1.00)	(395)	19:11	(1.41) *	(299) *
T+4	18/22	-1.22	-0.91	19/21	-0.03	-0.02	20/22	0.03	0.06
	6:12	(-1.10)	(61)	8:11	(-0.91)	(72)	14:6	(0.49)	(127)
T+5	9/9	5.31	4.36	8/9	0.05	0.00	8/9	-0.24	-0.06
	7:2	(1.39)	(34)	5:3	(1.12)	(23)	4:4	(-1.51) *	(10)

Table 11. Statistics of industry adjusted dividend ratios

The sample consists of 69 companies successfully conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ratio v.s. the number of effective events with negative ratio. In the column of "Mean" figures in black are mean value of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median value of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	Payout ratio			Dividend yield		
	Number	Mean	Median	Number	Mean	Median
T-5	51/57	9.77	0.00	31/37	0.09	0.00
	20:10	(2.81) ***	(362) ***	11:7	(1.35) *	(113)
T-4	55/60	7.32	0.00	40/43	0.25	0.00
	25:17	(1.58) *	(554)	16:12	(2.28) **	(293) **
T-3	58/62	8.17	0.00	52/58	0.37	0.00
	26:20	(1.90) **	(715) **	23:15	(3.06) ***	(535) ***
T-2	60/65	3.23	0.00	61/67	0.25	0.00
	24:28	(0.86)	(736)	28:24	(2.43) ***	(858) *
T-1	60/66	3.26	0.00	58/66	0.36	0.04
	25:26	(0.92)	(725)	29:19	(3.25) ***	(867) ***
T	59/63	16.06	14.12	61/67	0.70	0.45
	36:16	(3.58) ***	(1023) ***	35:11	(5.22) ***	(941) ***
T+1	48/52	9.60	0.00	51/59	0.51	0.00
	21:14	(2.52) ***	(445) **	21:9	(3.72) ***	(393) ***
T+2	43/46	13.28	0.00	45/48	0.77	0.26
	21:14	(2.79) ***	(456) **	23:6	(4.75) ***	(401) ***
T+3	30/34	3.97	0.00	32/35	0.40	0.15
	11:14	(0.81)	(184)	16:7	(2.02) **	(202) **
T+4	15/17	21.17	19.75	19/22	0.73	0.24
	10:2	(2.50) **	(67) **	10:1	(3.56) ***	(65) ***
T+5	7/8	2.00	0.00	9/9	1.27	0.00
	2:1	(0.26)	(4)	4:1	(2.00) **	(14) *

Table 12. Statistics of change in industry adjusted dividend ratios

The sample consists of 69 companies successfully conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ratio v.s. the number of effective events with negative ratio. In the column of "Mean" figures in black are mean value of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median value of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	Payout ratio			Dividend yield		
	Number	Mean	Median	Number	Mean	Median
T-5	39/44	-2.90	0.00	25/29	0.36	0.01
	11:17	(-0.58)	(173)	13:7	(2.14) **	(155) **
T-4	49/54	-5.32	-0.72	31/36	0.03	0.00
	16:26	(-1.05)	(369)	13:12	(0.26)	(167)
T-3	52/55	4.09	0.00	36/43	-0.12	0.00
	23:24	(0.85)	(628)	17:14	(-0.92)	(218)
T-2	52/61	-8.81	-3.06	52/58	-0.15	-0.01
	21:29	(-2.28) **	(449) **	23:26	(-1.31) *	(538)
T-1	56/63	-0.36	3.69	58/65	0.14	0.09
	29:24	(-0.08)	(718)	30:24	(1.01)	(879)
T	56/61	9.73	8.00	54/65	0.26	0.21
	36:16	(2.72) ***	(992) ***	30:18	(2.52) ***	(815) **
T+1	47/50	-7.38	0.00	51/58	-0.10	0.00
	19:23	(-1.81) **	(335) *	22:21	(-1.01)	(406)
T+2	36/40	5.92	13.31	43/47	0.20	0.00
	24:11	(1.44) *	(402) *	20:15	(1.33) *	(400) *
T+3	29/33	3.50	0.00	31/34	-0.00	0.00
	14:12	(0.78)	(202)	15:11	(-0.00)	(180)
T+4	15/17	2.03	6.54	18/22	-0.19	0.00
	8:5	(0.24)	(50)	5:8	(-1.25)	(29)
T+5	5/5	7.71	0.00	7/9	-0.07	0.00
	3:2	(0.87)	(10)	3:1	(-0.31)	(6)

Table 13. Statistics of industry adjusted stockholding returns, top and bottom line growth

The sample consists of 69 companies successfully conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ratio v.s. the number of effective events with negative ratio. In the column of "Mean" figures in black are mean value of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median value of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	Total holding return			Net profit growth			Revenue growth		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	27/29	-3.42	0.99	47/51	9.89	8.07	47/53	12.99	6.32
	15:12	(-0.57)	(168)	26:21	(1.18)	(674)	29:18	(2.53) ***	(748) **
T-4	36/38	5.97	0.32	55/61	9.45	7.18	62/65	15.68	9.13
	18:18	(1.19)	(380)	32:23	(1.75) **	(979) **	41:21	(3.61) ***	(1428) ***
T-3	41/45	3.65	-2.41	58/64	10.34	8.21	64/68	7.28	5.70
	17:24	(0.89)	(440)	37:21	(1.68) **	(1127) **	38:26	(2.58) ***	(1371) **
T-2	54/57	-0.05	-2.20	57/63	8.48	7.42	64/69	7.44	0.66
	26:28	(-0.01)	(723)	35:22	(1.68) **	(1012) *	33:31	(2.00) **	(1255) *
T-1	58/64	5.89	2.29	59/64	10.69	4.88	62/68	11.65	9.12
	33:25	(2.54) ***	(1126) **	36:23	(1.83) **	(1119) **	38:24	(2.81) ***	(1319) ***
T	59/65	1.60	-0.60	61/65	-10.43	1.23	59/67	9.43	9.91
	29:30	(0.52)	(877)	31:30	(-0.39)	(952)	44:15	(3.18) ***	(1312) ***
T+1	53/58	4.15	1.75	52/56	9.96	6.61	53/59	5.12	3.86
	28:25	(1.49) *	(841)	30:22	(1.18)	(817)	34:19	(1.86) **	(920) **
T+2	44/48	5.36	-1.09	39/43	14.29	1.81	45/49	1.04	0.11
	21:23	(1.48) *	(578)	20:19	(1.35) *	(413)	23:22	(0.28)	(516)
T+3	26/29	4.57	4.37	31/35	-17.44	-5.15	33/36	2.05	-0.12
	15:11	(0.96)	(208)	10:21	(-1.23)	(145) **	16:17	(0.59)	(305)
T+4	18/20	-5.87	-6.53	18/21	34.94	6.05	20/22	-5.60	-7.92
	5:13	(-0.92)	(63)	9:9	(0.48)	(113)	9:11	(-1.05)	(80)
T+5	8/9	-3.30	1.09	6/6	5.11	9.01	7/9	-5.17	-6.03
	4:4	(-0.58)	(16)	5:1	(0.43)	(15)	1:6	(-0.88)	(7)

Table 14. Statistics of change in industry adjusted stockholding returns, top and bottom line growth

The sample consists of 69 companies successfully conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ratio v.s. the number of effective events with negative ratio. In the column of "Mean" figures in black are mean value of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median value of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	Total holding return			Net profit growth			Revenue growth		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	16/18	-1.17	15.45	36/38	-42.30	-13.60	35/40	-2.56	4.65
	10:6	(-0.08)	(79)	15:21	(-0.61)	(226) **	18:17	(-0.49)	(317)
T-4	24/29	9.08	7.61	41/47	5.10	5.43	49/53	2.33	4.93
	15:9	(1.36) *	(197) *	24:17	(0.67)	(492)	26:23	(0.34)	(660)
T-3	32/38	1.22	8.99	54/59	-11.62	-10.13	59/65	-12.11	-5.30
	19:13	(0.26)	(291)	22:32	(-1.30) *	(525) **	24:35	(-2.27) **	(676) *
T-2	39/44	-8.07	-12.59	53/59	-3.92	-1.23	63/68	0.31	1.84
	15:24	(-1.27)	(295) *	26:27	(-0.54)	(645)	33:30	(0.07)	(998)
T-1	53/57	5.08	10.20	55/61	-5.86	-2.82	61/68	9.65	6.61
	29:24	(0.98)	(810)	26:29	(-0.72)	(698)	34:27	(1.82) **	(1167) *
T	54/62	-3.50	-2.00	57/61	-35.60	-22.82	62/67	-6.38	-5.31
	24:30	(-0.99)	(620)	22:35	(-1.50) *	(575) **	30:32	(-1.30) *	(845)
T+1	50/57	4.60	8.10	50/54	-10.11	5.15	53/58	-3.64	-5.77
	32:18	(1.37) *	(776) *	27:23	(-0.64)	(603)	20:33	(-1.00)	(586)
T+2	44/48	-3.34	-4.90	38/41	4.35	-4.05	41/49	-1.04	-0.68
	19:25	(-0.73)	(419)	18:20	(0.30)	(364)	19:22	(-0.30)	(387)
T+3	25/29	3.26	5.88	24/30	-24.01	-21.62	31/36	-5.56	-3.24
	15:10	(0.49)	(187)	6:18	(-1.95) **	(81) **	15:16	(-1.37) *	(182)
T+4	17/19	-11.02	-6.23	18/21	-4.42	10.16	19/22	-7.76	-10.71
	6:11	(-1.58) *	(50)	11:7	(-0.05)	(101)	7:12	(-1.14)	(66)
T+5	8/9	-10.61	-9.76	5/6	3.44	10.93	8/9	-10.97	-16.55
	3:5	(-1.19)	(10)	4:1	(0.17)	(10)	3:5	(-0.87)	(11)

Table 15. Statistics of industry adjusted growth rate of net asset value (ADJNAVG)

The sample consists of 77 companies conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive ADJNAVG v.s. the number of effective events with negative ADJNAVG. In the column of "Mean" figures in black are average ADJNAVG (%) of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median ADJNAVG (%) of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

Year	All			Net asset pricing			Net asset pricing of listing company		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	28/34	-0.81	0.12	16/20	0.42	0.19	6/6	2.63	0.00
	14:10	(-0.57)	(154)	8:5	(0.21)	(58)	2:2	(0.29)	(5)
T-4	37/43	5.28	1.19	18/22	-1.85	0.00	8/8	11.09	1.18
	20:13	(1.73) **	(343)	7:7	(-0.94)	(44)	4:1	(1.77) *	(13) *
T-3	41/50	3.12	0.71	19/24	1.52	0.50	7/8	2.69	0.67
	27:12	(1.85) **	(518) **	11:6	(0.87)	(92)	4:2	(0.61)	(13)
T-2	53/65	2.37	0.94	27/32	2.83	1.45	9/10	6.05	7.51
	31:20	(2.17) **	(834) *	17:8	(1.95) **	(227) **	6:2	(2.54) **	(33) **
T-1	65/72	1.66	0.00	32/36	1.61	0.00	11/12	-0.81	-1.14
	31:31	(1.80) **	(1138)	15:15	(1.25)	(277)	4:6	(-0.45)	(22)
T	63/74	3.42	1.56	32/38	2.18	0.00	10/12	5.17	1.28
	38:23	(2.54) **	(1296) ***	15:15	(1.40) *	(275)	6:3	(1.64) *	(35) *
T+1	53/65	0.56	0.00	28/33	0.08	-0.17	10/11	0.62	0.06
	26:24	(0.64)	(698)	12:15	(0.06)	(176)	5:5	(0.37)	(31)
T+2	45/55	0.89	2.60	25/30	2.16	2.60	9/11	4.26	4.60
	28:15	(0.69)	(609) *	16:8	(1.51) *	(206) *	7:2	(2.66) **	(40) **
T+3	33/40	1.82	0.26	21/23	1.60	1.49	9/9	-6.82	0.26
	18:13	(0.92)	(306)	13:7	(0.23)	(134)	5:3	(-0.48)	(18)
T+4	20/25	1.27	2.86	13/13	-17.78	1.36	6/6	-17.11	-1.06
	13:7	(0.43)	(136)	7:6	(-1.25)	(40)	3:3	(-0.65)	(8)
T+5	10/12	5.59	0.37	5/5	-1.96	-0.78	2/2	-1.11	-1.11
	5:5	(1.21)	(37)	1:4	(-0.86)	(4)	0:2	(-3.02)	(0)

Table 16. Statistics of change in industry adjusted growth of net asset value (DADJNAVG)

The sample consists of 77 companies conducted MBO, including all types of MBO except subsidiary disposal. The event year T is set to be the completion year of MBO.

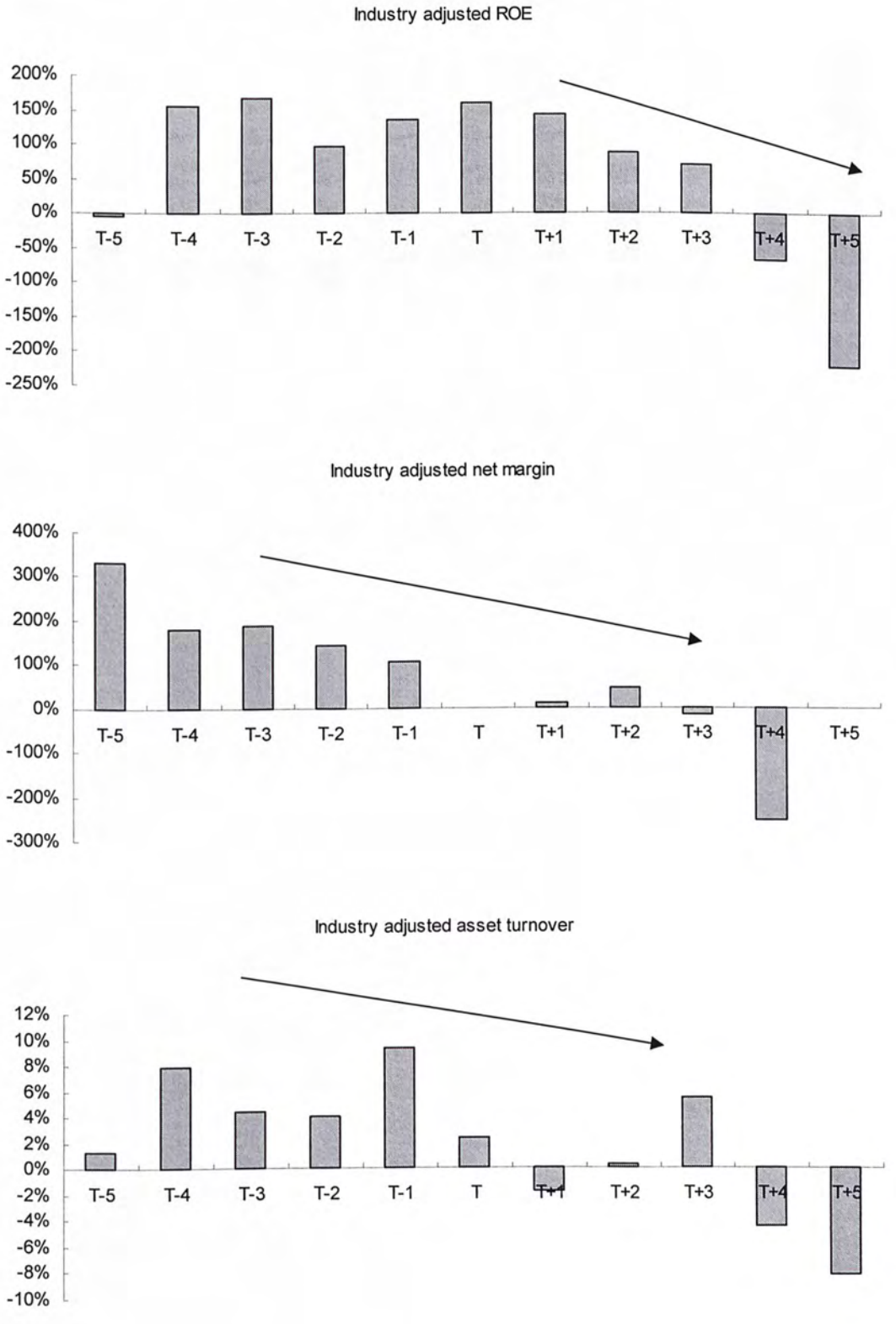
In the column of "Number", the figures in black represent the effective (after removing the abnormal observations) sample size out of all and figures in grey imply the number of effective events with positive DADJNAVG v.s. the number of effective events with negative DADJNAVG. In the column of "Mean" figures in black are average DADJNAVG (%) of the sample and figures in bracket is the t-statistics in student t test. In the column of "Median", figures in black are median DADJNAVG (%) of the sample and the figures in bracket is the Wilcoxon Z statistic in Wilcoxon test.

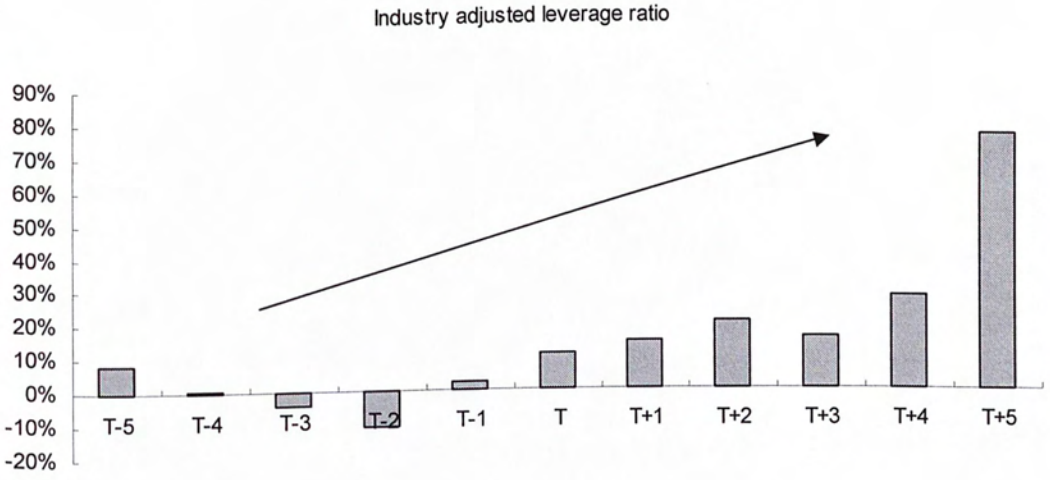
Year	All			Net asset pricing			Net asset pricing of listing company		
	Number	Mean	Median	Number	Mean	Median	Number	Mean	Median
T-5	19/24	-5.07	-1.38	12/14	-7.57	-3.00	3/3	-8.39	0.00
	7:10	(-1.69) *	(44) *	4:6	(-1.41) *	(15)	1:1	(-0.90)	(1)
T-4	31/34	1.36	0.80	19/20	-3.39	0.00	6/6	10.16	13.17
	17:12	(0.30)	(234)	9:8	(-0.59)	(66)	4:1	(0.79)	(11)
T-3	42/43	-4.40	0.00	21/22	10.48	1.79	6/8	-3.20	-3.67
	20:20	(-0.79)	(366)	12:7	(1.57) *	(127)	2:3	(-1.09)	(3)
T-2	46/50	-1.48	0.00	21/24	-6.49	0.00	7/8	-1.67	5.32
	22:22	(-0.39)	(461)	10:9	(-1.18)	(74)	4:2	(-0.23)	(10)
T-1	57/65	-5.07	-2.08	28/32	-0.86	-2.56	8/10	-7.64	-5.31
	22:35	(-2.04) **	(580) **	10:18	(-0.24)	(155)	1:7	(-2.77) **	(2) **
T	60/70	2.62	1.21	29/34	0.54	0.65	10/12	4.21	1.45
	38:22	(1.27)	(1118) *	18:11	(0.15)	(253)	8:2	(1.02)	(42) *
T+1	54/64	-1.04	-0.52	26/33	-1.87	-0.48	9/11	0.69	0.09
	23:31	(-0.70)	(603)	11:15	(-1.58) *	(141)	5:4	(0.83)	(26)
T+2	49/55	-1.71	0.09	26/30	1.14	0.56	11/11	5.62	0.80
	25:23	(-0.94)	(516)	16:10	(0.51)	(196)	8:3	(1.61) *	(49) *
T+3	34/40	-2.18	-1.60	20/23	-8.90	0.50	7/9	2.13	3.50
	13:20	(-0.70)	(252)	10:10	(-1.35) *	(95)	4:3	(0.45)	(16)
T+4	22/25	-6.25	1.28	12/13	-13.55	1.35	6/6	-29.86	-19.72
	12:10	(-1.24)	(121)	7:5	(-1.06)	(35)	3:3	(-0.94)	(7)
T+5	10/12	16.06	7.81	5/5	16.07	-2.84	2/2	-0.05	-0.05
	7:3	(2.12) **	(44) *	2:3	(0.79)	(6)	1:1	(-0.02)	(1)

Table 17. Comparison of MBO between US and China

	US	China
Acquired shares	Transferable shares	Non-tradable shares
Share pricing	Stock price in secondary market	Net asset value
Financing of MBO	Bond, loan and private equity	Self-owned money
Competition	Much	Little
Wealth gains	Positive	Negative
Operating performance improvement	Yes	No
Price manipulation	Yes	Yes

Chart 1. Industry adjusted measures




Industry adjusted leverage ratio
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
-10%
-20%
T-5
T-4
T-3
T-2
T-1
T
T+1
T+2
T+3
T+4
T+5